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The letters SA preceding the page number designate authors of special signed articles; the letter N indicates authors mentioned in the Notes section; LE refers to authors of Letters to the Editor; and B designates authors of recent books listed in the Notes section.

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BOOK NOTICES
Annual Report of Studies in Animal Nutrition and Allied Sciences, Vol. 27, 1971. Rowett Research Institute. 222.
Blood Vessel Disease in Diabetes Mellitus. K. Lundbaek and H. Keen, Editors. Il Ponte. 245.
Diet Management for Ulcerative Colitis. M. Hanson. Charles C Thomas. 98.

Evaluation of Food Additives, Fourteenth Report. FAO/WHO. 98.
Evaluation of Food Additives, Fifteenth Report. FAO/WHO. 222.
Experimental and Therapeutic Dietetics, Second Edition. M. A. Ohlson. Burgess Publishing Co. 222.
Famine. G. Blix, Y. Hofvander, and B. Vahlquist, Editors. Almquist & Wiksell. 24.
Food and Nutrition Education in the Primary School. FAO. 245.
Food Theory and Applications. P. C. Paul and H. H. Palmer, Editors. John Wiley & Sons. 222
Malnutrition: Its Causation and Control, Volumes I and II: With Special Reference to Protein-Calorie Malnutrition. J. R. K. Robson, F. A. Larkin, A. M. Sandretto, and B. Taddayon. Gordon and Breach. 262.
Newer Trace Elements in Nutrition. W. Mertz and W. E. Cornatzer, Editors. Marcel Dekker. 74.
Normal and Therapeutic Nutrition, Fourteenth Edition. C. H. Robinson. Macmillan. 174.
Nutrition, Eighth Edition. M. S. Chaney and M. L. Ross. Houghton Mifflin. 24.
Nutrition and Cardiovascular Diseases. F. Fidanza, A. Keys, G. Ricci, and J. C. Somogyi, Editors. Morgagni Edizioni Scientifiche. 150.
Nutrition and Nervous System. J. C. Somogyi and F. Fidanza, Editors. S. Karger. 245.
Nutrition, Behavior, and Change. W. H. Marshall, Editor. Prentice-Hall. 262.
Nutrition in Nursing. L. Anderson, M. V. Dibble, H. S. Mitchell, and H. J. Rynbergen. Lippincott. 244.
Physiology of Work Capacity and Fatigue. E. Simonson, Editor. Charles C Thomas. 24.
Planning and Evaluation of Applied Nutrition Programmes. M. C. Latham. FAO. 262.
Proceedings of the Sixth Symposium on Nutrition and Health in the Near East. D. S. McLaren and N. J. Daghir, Editors. Al'Khal Brothers. 198.
Report of the Second World Food Congress, Vol. II. FAO. 98.
Strategy Statement on Action to Avert the Protein Crisis in the Developing Countries. United Nations. 74.
Sugar: Chemical, Biological, and Nutritional Aspects of Sucrose. J. Yudkin, J. Edelman, and L. Hough, Editors. Daniel Davey & Co. 74.
Sweetness and Sweeteners. G. G. Birch, L. F. Green, and C. B. Coulson, Editors. Applied Science Publishers. 262.
Symposium on Total Parenteral Nutrition. American Medical Association. 198.
The Science of Nutrition. M. T. Arlin. Macmillan. 98.
The State of Nutrition in the Arab Middle East. V. N. Patwardhan and W. J. Darby. Vanderbilt University Press. 150.
Western Hemisphere Nutrition Congress III-1971. P. L. White, Editor. Futura. 245.
World Review of Nutrition and Dietetics, Vol. 13. G. H. Bourne, Editor. S. Karger. 24.
World Review of Nutrition and Dietetics, Vol. 14. G. H. Bourne, Editor. S. Karger. 174.
Zinc Metabolism. A. S. Prasad, Editor. Charles C Thomas. 262.

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